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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,429	10/29/2003	Bogdan Kowalczyk	47171-00408USPT	7741

41230 7590 05/16/2007

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EXAMINER

BEAUCHAINE, MARK J

ART UNIT	PAPER NUMBER
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3653

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/697,429

Applicant(s)

KOWALCZYK ET AL.

Examiner

Mark J. Beauchaine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 October 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The use of the trademark MICROBLUE has been noted in this application (specification page 9, line 1, *et seq* and claim 22, line 7). It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The Applicant's original disclosure fails to include the term "durable" as being used to describe the claimed solid lubricant. Furthermore, no description of said term was presented in the original disclosure that would enable one of ordinary skill in the art to determine the Applicant's specific

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meaning and scope of said term. Thus, the subsequent introduction of the term "durable" (claim 1, line 6; claim 7, line 7; claim 13, line 4; claim 16, line 6; claim 18, line 3; and claim 22, line 6) constitutes new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "durable" (claim 1, line 6; claim 7, line 7; claim 13, line 4; claim 16, line 6; claim 18, line 3; and claim 22, line 6) is a relative term which renders the claim indefinite. The term "durable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-9, 13-16 are rejected under 35 U.S.C. 102(b) as anticipated by Patent Number 5,370,575 by Geib et al ("Geib") or, in the alternative, under 35 U.S.C. 103(a) as obvious over Geib in view of Patent Number US 6,977, 096 by LeClaire ("LeClaire"). The coin processing device disclosed by Geib comprises rotatable disc 13 for imparting motion to a plurality of coins, and stationary head 12 having a lower surface generally parallel to and spaced slightly away from the rotatable disc (see Figures 1 and 3 and column 2, lines 26-36). The lower surface/substrate of said stationary head has a plurality of shaped regions 64 and 72 having dimples 100 on a first surface for controlling the movement of coins (see Figure 2), a solid lubricant disposed thereon (see abstract at lines 7-10; column 1, lines 52-57; and column 7, lines 11-21), and a plurality of exit channels 27-32 for discharging coins.

The solid lubricant disclosed by Geib may or may not be durable in the context of the Applicant's claimed invention. In the alternative, LeClaire teaches durable solid lubricant 30 that comprises tungsten disulphide particles having a thickness of about one micron and is disposed on in dimples of surface 24 (see Figure 3; column 1, lines 14-37; and column 4, line 44 through column 5, line 15) for the purpose of increasing lubricity between said surface and articles sliding against said surface. Said dimples are sized to said tungsten disulphide particles. LeClaire further teaches said lubricant being disposed on substrates comprising various commercially available alloys (column 5, lines 37-49). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the durable solid lubricant of LeClaire into the

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coin processing device of Geib for the purpose of increasing lubricity between the surface and articles sliding against said surface.

Claims 4 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Geib or Geib in view of LeClaire as applied to claims 1 and 7 above, and further in view of Patent Number US 6,734,147 B2 by Levy ("Levy"). Geib or Geib in view of LeClaire fails to disclose said durable solid lubricant as having a thickness of less than about one micron. Levy teaches a durable solid lubricant that is applied to a substrate, comprises tungsten disulphide particles and has a thickness of less than about one micron (see column 6, line 57 through column 7, lines 17; and column 12, line 61 through column 18, line 10) for the purpose of increasing the lubricity between the substrate and articles sliding against said substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the lubricant thickness of Levy into the coin processing device of Geib or Geib in view of LeClaire for the purpose of increasing the lubricity between the substrate and articles sliding against said substrate.

Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geib or Geib in view of LeClaire as applied to claims 1 and 7 above, and further in view of Patent Number 4,131,491 by Joseph ("Joseph"). Geib or Geib in view of LeClaire fails to disclose sorting head/substrate 12 as being constructed of a 4140 Alloy Prehard Steel. Joseph teaches substrate 20 constructed of 4140 Alloy Prehard Steel (column 6,

lines 16-27) for the purpose of providing structural integrity to said substrate that is sufficient to sustain contact by articles sliding against said substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the machine component of Geib or Geib in view of LeClaire with the alloy of Joseph for the purpose of providing structural integrity to said substrate that is sufficient to sustain contact by articles sliding against said substrate.

Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geib or Geib in view of LeClaire as applied to claims 1 and 7 above, and further in view of Patent Number 5,270,374 by Ratliff ("Ratliff"). Geib or Geib in view of LeClaire fails to disclose sorting head/substrate 12 as being constructed of a Nitralloy 135 steel. Ratliff teaches substrates constructed of Nitralloy 135 steel (column 6, lines 65-4) for the purpose of providing structural integrity to said substrate that is sufficient to sustain contact by articles sliding against said substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the sorting head/substrate of Geib or Geib in view of LeClaire with the Nitralloy of Ratliff for the purpose of providing structural integrity to said substrate that is sufficient to sustain contact by articles sliding against said substrate.

Claims 17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geib or Geib in view of LeClaire as applied to claim 16 above, and further in view of Patent Number US 6,790,295 B2 by Kinoshita et al ("Kinoshita"). Geib or Geib in

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view of LeClaire fails to disclose the act of polishing a first surface after machining.

Kinoshita teaches a substrate that has lubricant-retaining dimples (column 1, lines 55-59) and is polished after being machined (column 2, lines 47-51) for the purpose of enhancing the lubricity of the substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the acts of machining and polishing of Kinoshita into the manufacturing process of the device of Geib or Geib in view of LeClaire for the purpose of enhancing the lubricity of substrate.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geib or Geib in view of LeClaire as applied to claim 16 above, and further in view of Ratcliff. Geib or Geib in view of LeClaire fails to disclose the act of subjecting the substrate to a nitride and heat treatment during the manufacture of said substrate. Ratcliff teaches the act of subjecting a metal substrate to a nitride and heat treatment process during the manufacture of the substrate for the purpose of enhancing the surface hardness and service life of the substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the nitrating and heating acts of Ratcliff into the manufacturing process of Geib or Geib in view of LeClaire for the purpose of enhancing the surface hardness and service life of the substrate.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Geib in view of Design News Publication LESS FRICTION, MORE SPEED, dated 3 December 2001, pages 1-6 ("said publication"), or in the alternative, over Geib in view of LeClaire

in view of said publication. Geib teaches a coin processing device comprising rotatable disc 13 for imparting motion to a plurality of coins, and stationary head 12 having a lower surface generally parallel to and spaced slightly away from the rotatable disc. Said lower surface has a plurality of shaped regions 64 and 72 for controlling the movement of the coins, and has solid lubricant disposed thereon (see abstract at lines 7-10; column 1, lines 52-57; and column 7, lines 11-21).

The solid lubricant disclosed by Geib may or may not be durable in the context of the Applicant's claimed invention. In the alternative, LeClaire teaches durable solid lubricant 30 that comprises tungsten disulphide particles having a thickness of about one micron and is disposed on in dimples of surface 24 (see Figure 3; column 1, lines 14-37; and column 4, line 44 through column 5, line 15) for the purpose of increasing lubricity between said surface and articles sliding against said surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the durable solid lubricant of LeClaire into the device of Geib for the purpose of increasing the lubricity between said surface and articles sliding against said surface.

Geib or Geib in view of LeClaire fails to disclose a MICROBLUE coating. Said publication teaches a MICROBLUE coating of tungsten disulphide particles applied to an underlying surface for the purpose of increasing the lubricity between said surface and articles sliding against said surface. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the MICROBLUE coating of said publication into the device of Geib or Geib in view of LeClaire for the

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purpose of increasing the lubricity between the surface and articles sliding against said surface.

Response to Arguments

Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark J. Beauchaine whose telephone number is (571)272-6934. The examiner can normally be reached on 8:00AM through 5:00PM Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mjb



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